



Fact Sheets and Information Papers

Managing Regulated Medical Waste During a Pandemic Outbreak

June 2006

BACKGROUND: Scientists and public health officials believe a mutation of avian flu strain H5N1 could result in a pandemic outbreak of the flu in humans. The impact of an actual pandemic cannot be predicted precisely, as it will depend on the virulence of the virus, how rapidly it spreads, the availability of vaccines and antiviral medicines, and the effectiveness of medical and non-medical containment measures.

CURRENT SITUATION: The current potential for a pandemic flu outbreak in the United States requires that the Army develop a contingency plan to address the management and disposal of regulated medical waste (RMW) in military treatment facilities (MTF) or homes where pandemic flu patients are treated. Contracts currently in place for the transport, treatment, and disposal of RMW may be disrupted or unavailable in cases of pandemic outbreaks. The potential for a RMW disposal contractor to become overwhelmed with increased waste volumes during a pandemic outbreak is very real and should be addressed in MTF Emergency Response Plans. This fact sheet provides alternatives for the disposal of RMW when the disposal contractor is unable to service the MTFs.

RESOURCES: Available literature provides information to assist in preparing and responding to a possible pandemic flu outbreak. The Department of Defense (DOD) has issued guidance for [Preparation and Response to an Influenza Pandemic Caused by the Bird Flu \(Avian Influenza\)](#), which requires MTFs to have response plans that are coordinated and synchronized with local health authorities. Additionally, DOD Directive 6200.3, Emergency Health Powers on Military Installations, requires installation Commanders to designate a Public Health Emergency Officer. USACHPPM's Pandemic [Influenza Fact Sheet for Leaders](#) provides military planning information.

WASTE MANAGEMENT: MTFs must prepare for an increase in the amounts of RMW generated due to the influx of patients during a pandemic outbreak. The [Centers for Disease Control and Prevention \(CDC\)](#) and [World Health Organization \(WHO\)](#) have directed healthcare providers to follow standard precautions (i.e., gloves, gowns) for contact with blood and body fluids and infectious waste. Additional transmission-based precautions for possible respiratory secretion droplets and patient contact is also provided.¹ Medical Command (MEDCOM) treatment facilities should follow [MEDCOM Regulation 40-35](#) RMW management guidance as well as any federal, state, and local requirements. In the case of conflicting requirements, the more stringent regulation must be followed.

During a pandemic outbreak, MTFs should coordinate with local emergency response personnel because surrounding civilian hospitals will encounter similar problems. A local community contingency plan may already be in place that the MTF can participate in. In the event that a

local contingency plan is unavailable and the disposal contractor is inadequate or unavailable, the following emergency disposal/treatment alternatives should be considered.

- Procure a portable treatment unit (i.e. microwave, chemical disinfection, incinerator, etc.). Some information on portable equipment may be found at ²:
<http://www.medcoach.com/products/medicalwaste/index.html>
<http://www.medshred.com/internet/news/2005/08-01-05.html>
<http://www.elastec.com/incineral.html>
- Procure a refrigeration unit to store excess RMW until treatment options are available.
- Treat sharps in their containers using products which disinfect and solidify the contents. Generally, sharps may then be disposed as regular solid waste, though state and local regulations should be consulted first.
- Sharps may also be treated with a hospital approved disinfectant, such as a simple bleach solution, to render them non-infections before disposal as a regular solid waste (following consultation with state and local regulators). The hospital infection control officer should be consulted regarding this method of disinfection.
- If permissible, dispose of the untreated RMW in the on-post solid waste landfill. The installation environmental office and responsible environmental state agency should be consulted before doing so. See below for a list of on-post landfills as of May 2006 (data provided by the Office of the Assistant Chief of Staff for Installation Management (ACSIM)).

Camp Zama	Fort Hood
Dugway Proving Ground	Yuma Proving Ground
Fort Bliss	Fort Sill
Fort Detrick	Fort Stewart
Fort Greely	Fort Wainwright
Lonestar Army Ammunition Plant	Sierra Army Depot
Stallion Range (WSMR)	Fort Irwin

- Where an on-post landfill is not available, dispose of the untreated RMW in a temporary aboveground landfill lift. The installation environmental office and responsible environmental state agency should be consulted, before establishing a temporary aboveground landfill lift, as well as ACSIM.
- The host installation environmental office should always be consulted regarding regulatory issues before proceeding with any treatment and/or disposal of RMW during a pandemic.

OTHER ISSUES TO CONSIDER – HOME HEALTH CARE

RMW such as sharps, contaminated PPE, and other treatment waste from home care should remain at the treatment site with the patient and be disposed as household waste. Sharps may be collected in thick plastic containers, such as empty laundry detergent containers, milk jugs, or coffee cans with tight fitting lids.

The management and disposal of RMW generated within households should adhere to any guidance issued by state and local public health policies and publications. MTF personnel who treat patients in their homes may obtain local public health waste management guidance from the local health department and may provide that information to household members. Guidance from local health authorities may include types of containers, labeling, placement of refuse, and precautions to take. Other information from local health departments may include revised frequency of trash collection and other factors affecting the community as a whole.

Regular household trash bags should be double or triple bagged if they are less than 3 mils (preferred thickness) or if there is a concern that they are not sturdy enough to securely hold the RMW. Unless the local MTF Commander has directed differently, MTF personnel should not return RMW that is generated in home care settings to the supporting MTF. In the event that the local Commander directs transport back to the MTF, transportation should only occur in government vehicles, containing appropriate spill kits, by personnel who have had appropriate DOD driver's training (requirement for public road transport).

OTHER ISSUES TO CONSIDER – MTF

It is quite possible that the hospital will run out of sharps containers during a pandemic outbreak. In this case, plastic storage containers with snap-on lids could be procured locally. These containers must be labeled with the universal biohazard symbol. Once full, the containers should be securely taped, using strapping tape, or the like, to ensure they are tightly sealed.

RMW bags could conceivably be in short supply as well. General trash bags may be used as a substitute provided that the RMW receptacles are doubled or tripled bagged, as necessary to maintain a 3 mil barrier between the RMW and the waste handlers. These bags, as well as the receptacles, must display the universal biohazard symbol.

MEDCOM ASSISTANCE:

For additional assistance and guidance if the RMW disposal contractor is delayed or not able to provide services contact:

MEDCOM HQ - ACSLOG
Program Management Office Environmental Services
DSN: 471-6701/8686
COMM: 210-221-6701/8686

ADDITIONAL RESOURCES:

<http://www.pandemicflu.gov/>

[USACHPPM Avian and Pandemic Flu Information Site](#)

[Department of Health and Human Services](#)

[Handling of Human Remains from Natural Disasters](#)

[State RMW Contacts](#)

¹ Influenza (H5N1): WHO Interim Infection Control Guidelines for Health Care Facilities, 10 March 2004

² USACHPPM is not endorsing these products, they are only meant to be examples.

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